Notes from the 4/21/05 and 4/26/05 MI BPM Requirements Meeting
Stephen Wolbers
These notes can be found in Beams docDB #1526.

4/21/05:

1. Alberto Marchionni and Dave Capista - requirements

- Alberto and Dave went through the requirements for the upgraded MI BPM. The discussion covered the modes of operation, the number and types of BPMs that need to be upgraded (included a few to be built), the choice of V and H measurements and where, cables, diagnostics, measurements specifications, accuracy, precision.

- There was also discussion about the buffers, cycles, data types, control, TCLK, BSYNC, states, PROFILE and FLASH, injection, extraction, etc.

- Applications, maintenance and calibration were also mentioned as part of the requirements discussion.

- During this presentation there was a large amount of discussion and this will go into an update of the requirements. There was a strong desire that the current (un-updated) version be put into docDB as soon as possible and that was done. It can be found as docDB #1786.

4/26/05:

- Marv Olson will be investigating space in the service buildings and will give a report in a future meeting. A starting point proposal for electronics layout is to have no more than 32 BPMs (8 Echotek boards) per VME subrack.

Manfred Wendt - Discussion of MI BPM stripline response and power

- Manfred gave a very nice discussion of the MI BPM, its response to beam, and the power that needs to be handled in the summing circuits that go into the MI tunnel.

- Manfred has written up this work in a note in docDB #1803.

- As far as power that will have to be handled by the summing circuits in the tunnel the maximum power is 6.35W. A circuit design that uses 100 MHz Gaussian low-pass filters reduces the power in the power combiner to 0.33W. Most of the power is dissipated in the filters.

- The summing box circuit is being prototyped. The goal is to have these ready for installation during the shutdown.

- We had a discussion of the large aperture BPMs being constructed now (part of a new set of quadrupole magnets). A question was raised about the position of the BPM electrodes -- should they be at 45 degrees or 90 degrees.

2. Dave Capista - MI clock events and states

- Dave showed the clock and SYNC events used by the MI. In addition he showed the states (MDAT) that are defined for MI. There are 31 of them defined (some used for studies) at the moment.

- Some of what was shown can be found in the docDB #1806.

3. AOB

- Next week's possible topics:

  Marv Olson's service building survey.
  Large aperture BPM
  TeV BPM Timing card and clock system (docDB #1065)